

A. I. BARANOV*: **A critical note on *Lactuca saxatilis* Bar.
and *L. chelidoniifolia* Makino**

バラノフ: *Lactuca saxatilis* と *L. chelidoniifolia* について

The first of the plants under description was collected originally by the present writer in 1952, among the forests and mountains of E. Manchuria, in the secluded region of Mt. Tatoutingtzu, some 60km to the S.-E. from the Station Weiho of the former E. Branch of the Chinese Eastern Railway.

The collected specimens were examined in the laboratory and, so far as the writer could not identify these with any of the species of *Lactuca* known from Manchuria, they were described in 1954 as a new species under the name of *L. saxatilis* (alias *Ixeris saxatilis*).

The periodical, in which this description was printed, was not a well known one and, besides, proved to be ephemeral in consequence of which the diagnosis of *L. saxatilis* did not received wide circulation among the botanists. So it could not be said that it was published properly and in view of this, the writer, in 1960, has re-described this species.

In the meantime Dr. M. Kitagawa of the Yokohama National University has advanced the opinion that *L. saxatilis* may prove to be conspecific with the *L. chelidoniifolia* Makino described from Japan. He even was so kind as to place in the disposal of this writer fragments of the herbarium specimens of the latter species and some abstracts from the appropriate literary sources.

This writer was also lucky to receive fragments of the specimen of *L. saxatilis* from Mr. B. V. Skvortzov of Harbin, China, and thus it became possible to make the comparative study of the both species.

This study showed that at a first sight the named 2 plants are very similar to each other in vegetative habit, but that this likeness is of a superficial character. Through examination disclosed many differences between them, especially in the structure of the heads and fruits.

The descriptions and illustrations of *L. saxatilis* may be found in 2 papers by this writer and it is also reported (without a figure) in the latest key to the plants of the N. E. China, published by Academia Sincica. [1] [2] [3]. Below is given the synonymy of this species.

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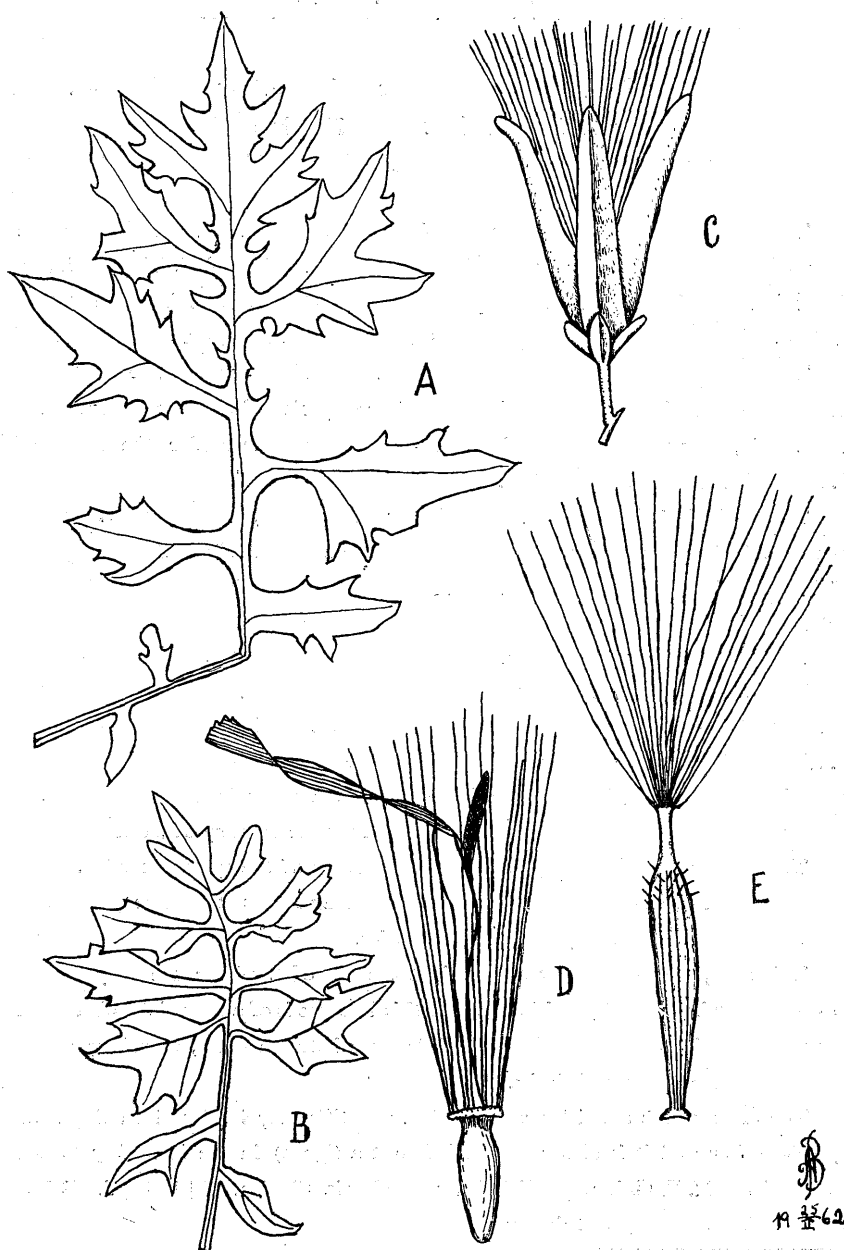


Fig. 1. *Lactuca cheudoniifolia* Makino.

A—B. Leaves. C. Mature head. D. Flower. E. Fruit.
(A. $\times 1.5$. B. $\times 2$. C. $\times 8$. D. $\times 16$. E. $\times 9.5$).

L. saxatilis Baranov in Ber. et Skv. Diagn. pl. novar. et minus. cogn. Mandsh. Fasc. II, (Acta. Soc. Harb. Investig. Nat. et Ethnogr. No. 12) (1954) 34, fig. 27, in Feddes Repert. Bd. 63, Heft 3 (1960) 289-290, fig. 1, et in Quart. Journ. Taiwan Mus. vol. XIII, Nos. 3 & 4 (1960) 220-221, fig. 1. *Lexis saxatilis* Bar. l.l.c.c.; T.N. Liou, Claves Pl. Chinae bor.-or. (1959) 434.

It was described originally as having following characters. Small, tender annual, 12.5cm high, totally glabrous, with erect stem and sessile pinnatipartite leaves 2.1-6.2cm long and 0.7cm broad, having very narrowly alate rachis and subopposite or opposite segments. Stipes of the latter are narrow, near the junction with the rachis abruptly dilated. Segments from lanceolate to broad ovate in outline, often oblique, irregularly incised-dentate, scarce, remote. Inflorescences corymbose, developing in the leaf axils and terminating stem and branches. Heads few, oblong. Involucre 2-seriate, at the base blackish (broad ovate outer scales), in the upper part light green (linear oblong inner scales). Florets yellow, 5. Fruits 0.75-1mm long, brown, ovate or elongate, on the apex crowned with the short white collar, toward base narrowed and then abruptly dilated in the basal scar. Pappus purely white, 3.5mm long, with serrated bristles.

The re-examination of the herbarium specimens of the *L. saxatilis* allowed to make next emendations and corrections in the above given diagnosis. This plant sometimes attains only 10cm in height. The rachis of the leaves is very slender, sometimes somewhat flexuose. Leaf segments are not incised-dentate, but sinuate-incised, with lanceolate or ovate, acute lobes. (Fig. 2, A, B). Heads are not 11mm long, as it was erroneously written in the original diagnosis, but 5mm long and 2mm broad, with the pappus *not exerted* from the involucre. (Fig. 2, C). Inner scales of the involucre are 5mm long, light green, towards the apex becoming atrate. Pedicels are not 5mm, but 3mm long. Fruits about 1mm long and 0.5mm broad, flattened, smooth, broad, pot-shaped in outline, sometimes oblique, without beak on the top crowned with the base of the style and the white collar-shaped ring, at the base furnished with the basal scar and an appendix of unknown destination. (Fig. 2, G, H). Pappus 3mm long, i.e. 3 times longer than the fruit. Fig. 2, F).

The descriptions of the *L. chelidoniifolia* were published by Dr. T. Makino, by Komatsu and by S. Murakoshi. The latter authors give also the illustration of the named plants. [4] [5] [6]. Besides, this was listed by Ohwi in his "Flora of Japan" as *Paraixeris chelidoniifolia*. Its synonymy is viz. *L. chelidoniifolia*

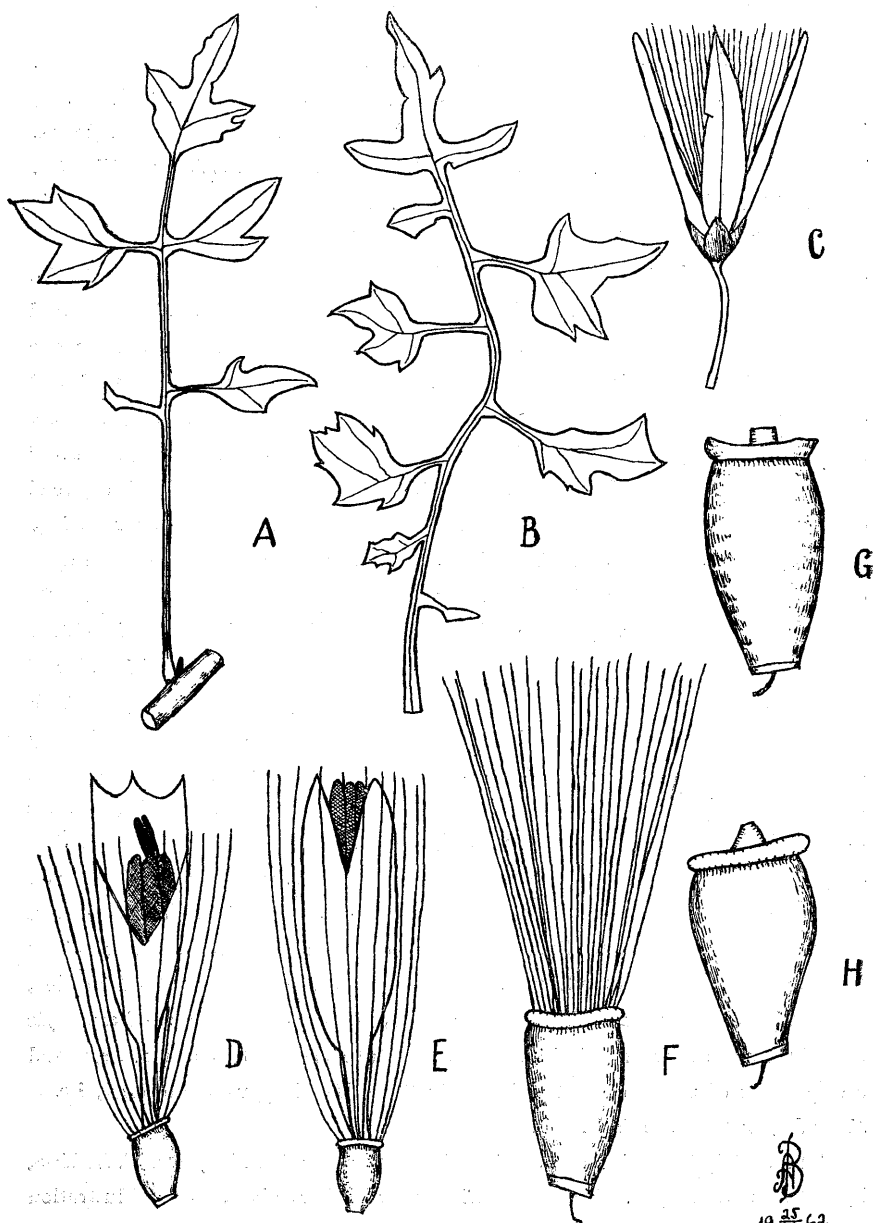


Fig. 2. *Lactuca saxatilis* Baranov.

A—B. Leaves. C. Mature head. D—E. Flowers. F. Fruit. G—H. Fruits without pappus.
(A—B. $\times 3$. C. $\times 8$. D—E. $\times 16$. F. $\times 30$. G—H. $\times 40$).

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Makino in sched. herb. Sci. Coll. Imp. Univ. Tokyo, 1896, in Bot. Mag., Tokyo **12** (1898) 47; Komatsu in Matsumura, Icones Plant. Koishikawensis **1-3** (1912) 63, tab. 32; Yamatuta, Enum. of Manch. Plants (1930) 278. *Ixeris chelidoniifolia* (Makino) Stebbins in Journ. of Bot. **75** (1937) 46. *Paraixeris chelidoniifolia* Nakai in Bot. Mag., Tokyo **34** (1920) 156. Ohwi, Fl. of Jap. (1953) 1251. *Youngia chelidoniifolia* Kitamura in Acta Phytotax. et Geobot. **11** (1942) 128; in Mem. Coll. Sc., Univ. Kyoto, ser. B, **22**, No. 1 (1955) 121.

Dr. Makino has described it as a glabrous mountain annual, 5-40cm high, branching from the base. Leaves sparse, odd pinnatisected, 4-12cm long, 2-6cm broad. Rachis slender, filiform. Segments more or less subopposite, obliquely ovate, scanty and coarsely lobate-dentate or lobate, towards the base narrowed so as to form a petiole which is abruptly dilated at the base and decurrent adnate to the rachis. Corymbs small, terminating stem and branches. Heads small, pedicellate. Involucre cylindrical-oblong. Involucral scales villosulate at the apex, about 5mm long in flower. Florets yellow, 4-5. Achenes cylindrical-fusiform, slightly compressed, 10-ribbed, not beaked, but gradually narrowed above, hispidulous-scabrous in the upper part, scarcely 5mm long.

The study of the herbarium material from Japan showed that the leaves of *L. chelidoniifolia* are 2.2-9.5cm long and 0.9-5.5cm broad, and have not slender, but rather robust and broadly alate rachis. Leaf segments are rather numerous, adherent and not scanty, but strongly incised. The parts joining them with the rachis are short, broadly decurrent on the latter (Fig. 1, A, B). Heads, with the pappus, are 8mm long, involucre is 5-6mm long, i.e. pappus is to 2-3mm exerted from the latter. Pedicels 3mm long. Outer involucral scales dark green, but not blackish, oblong. Inner scales light green. The villosity on their tips was not observed by this writer (Fig. 1, C). Achenes narrow fusiform, 4mm long, about 0.75mm broad, on the basal end dilated in basal scar, ribbed, dark brown, on the top end, contrary to Makino, narrowed in a distinct, light colored, smooth beak, which is about 1mm long. Under the beak the fruits are beset with minute, but distinct spines. Pappus purely white, equal to the achene, with serrated bristles. (Fig. 1, E).

In summarized form the differences between the 2 compared species may be learned from the following analytical key.

1. Small, tender plant, 10-12cm high. Leaves 2.1-6.2cm long, 0.7-3cm broad. Segments 0.4-1.0cm long, 0.05-1.0cm broad, lesser incised, fewer

in number and more remote than in the next species. Rachis slender, very narrowly alate. Basal part of the segments very narrow, slender, and, comparatively with the length of the upper part, longer than in the next species. Heads 0.5cm long. Pappus not exserted. Outer involucre scales broad ovate, very dark. Fruits about 1mm long and 0.5mm broad, pot-shaped, flattened, broad, smooth, not beaked, on the top with the base of style and white, collar-shaped ring. Pappus 3 times longer than the achene..... *L. saxatilis* Baranov

1.1. Plant more robust, to 40cm high. Leaves 2.2-9.5cm long, 0.9-5.5cm broad. Segments 0.4-3cm long, 0.1-2.2cm broad, more numerous, adherent and incised-dentate than in preceding species. Rachis broader alate. Basal parts of the segments broader and, in comparison with the length of the upper part, shorter than in preceding species. Heads 8mm long. Involucre 5-6 mm long. Pappus strongly exserted. Outer involucre scales oblong, somewhat darker, than the inner ones. Fruits 4mm long, about 0.75mm broad, narrow fusiform, beaked, ribbed, below the beak scabrous. Pappus equal to the achene..... *L. chelidoniifolia* Makino

On the basis of this botanical evidence we may conclude that *L. saxatilis* and *L. chelidoniifolia* are 2 species quite different from each other. To give to the readers the possibility of making their own judgement this note is furnished with the illustrations of both of them.

On the other hand there exist certain likeness between the named 2 plants. For instance, the authors who studied them, refer to the peculiar vegetative habit and marked difference of these from all other members of the genus. [2] [4].

Dr. Makino writes about *L. chelidoniifolia* as about "rare and singular species" and adds that "sterile specimens present the appearance entirely uncommon to the genus." This writer observed, concerning *L. saxatilis*, that "this curious plant exhibits no relationship to any of the members of this genus hitherto known in Manchuria". Ecologically both plants are also identical. They are confined to the mossy rocks in the shade of trees, in the mountainous regions.

It is difficult, so far, to outline the geographical ranges of the species under description, especially that of *L. saxatilis*. For the *L. chelidoniifolia* it is known that it is distributed in Japan and Corea, and some authors report it from South Manchuria (Mt. Fenghuang-shan). [5]. *L. saxatilis* is recorded in Manchuria

and, apparently, in Ussuriland. This gives possibility to assume that it is distributed, though sporadically, but throughout the whole region of Manchurian Flora. [1] [2]. In this connection an interesting question arises, namely to ascertain where lies the boundary between the geographical areas of the both *Lactucas* on the continent of Asia.

L. saxatilis in Manchuria is very rare. There is known hitherto only single habitat of it [1] [2]. In this *locus classicus* it was found by the writer in 1952 and by the exploratory party of the Institute of Forestry of Academia Sinica in 1953. This accounts for the fact that this plant was discovered and described so lately.

In conclusion the writer takes the opportunity to express his gratitude to Dr. M. Kitagawa, Dr. T. Koyama and Mr. B. V. Skvortzov for their kind help rendered to him during preparation of this paper.

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□行方沼東：シダの採集と培養 B 6 判 357 ページ，1961 年 12 月東京加島書店発行，550 円。日本シダの会の会長であり歌人でもある著者が，長い経験にもとづいて書いたもの。シダとはどういうものかに始まってシダの一般的な知識，採集の場所，方法，植え方，ふやし方などに及び，シダの美しさとおもしろさを説いている。巻頭 64 ページのアートの写真と本文中の写真は鉢植えや現地での生態を撮ったもので，見るだけでも楽しい。巻末に倉田悟氏と共著の「日本産シダ植物総目録」97 ページがあり，707 種類の学名，和名，分布，生活型などがまとまっていて便利であるが，これは本書とは大分性格が違うようで，ことにこの中で新学名を 48 も発表しているのは場違いの感じがする。これを抜いて別の本にし，かわりに和名索引を入れたらもっとすばらしかっただろうと考える。

(伊 藤 洋)